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Apparatus and Method of Making a Droplet Target

BACKGROUND OF THE INVENTION.

1. Field of the invention.

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The invention relates to an apparatus for making a droplet target provided with at least one receptacle for receiving ~~the~~ a target liquid and in which a high pressure is ~~realized~~ generated by means of gaseous nitrogen, a magnetic valve connected to the receptacle and switchable in the ms range, and a nozzle, as well as to a method of forming a droplet target.

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2. The Prior Art.

Hereafter, devices known in the prior art will be described by which liquid droplets are being generated wherein the interaction of laser beams
20 aimed at these droplets generates X-rays or extreme ultra-violet light. Such rays are used, for instance, in microscopy and lithography.

U.S. patent No. 6,324,256 describing an arrangement of a laser plasma source for generating EUV light, also refers to a device for making
25 droplet targets. The droplets made are of a diameter larger than the diameter of droplets generated by a gas fed through a nozzle where it condenses to form a cloud of clusters of extremely small particles. As described, a liquid is formed from the gas by means of a heat exchanger which ~~reduced~~ reduces the temperature of the gas. The liquid is fed to a nozzle the opening of which
30 increases in the direction of the exit opening. The droplets are formed in this section and then exit from the exit opening of the nozzle to interact with a laser beam for generating EUV light. However, it is not possible in this